Food and Agriculture Organization of the United Nations

United Republic of Tanzania

# FORESTS FOR A SUSTAINABLE FUTURE

EDUCATION MODULES FOR PRIMARY SCHOOLS

## PUPIL'S BOOK

MODULE 2

FORESTS, HEALTH AND WELL-BEING

SHOUT
SHARE
IT

# FORESTS FOR A SUSTAINABLE FUTURE

EDUCATION MODULES FOR PRIMARY SCHOOLS

## PUPIL'S BOOK

MODULE 2
FORESTS, HEALTH AND WELL-BEING

Published by
the Food and Agriculture Organization of the United Nations
and
Ministry of Natural Resources and Tourism

Required citation:
FAO and Ministry of Natural Resources and Tourism, the United Republic of Tanzania. 2024. *Forests for a sustainable future: education modules for primary schools – Teacher's book: Module 2 Forests, health and well-being*. Rome. https://doi.org/10.4060/cc4630en

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) or Ministry of Natural Resources and Tourism (MNRT) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO or MNRT in preference to others of a similar nature that are not mentioned.

ISBN 978-92-5-137691-1 [FAO]
© FAO, 2024

Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons license. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original English edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization http://www.wipo.int/amc/en/mediation/rules and any arbitration will be in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL)

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

# Contents


**Foreword** v
**Acknowledgements** vi

**Chapter 1. The benefits of forests** 1
Lesson 1. What are the benefits of forests? 3
Lesson 2. Take a fantasy forest journey 5
Lesson 3. Promote forest benefits 6

**Chapter 2. Food from the forest** 9
Lesson 4. Which foods come from the forest? 11
Lesson 5. Identify foods from the forest 13
Lesson 6. Which parts of forest plants are edible? 13

**Chapter 3. Edible insects** 17
Lesson 7. What is an insect? 19
Lesson 8. Explore the benefits of edible insects 21
Lesson 9. Discover an edible insect recipe 22

**Chapter 4. Hunting** 26
Lesson 10. Who hunts what in Tanzanian forests? 27
Lesson 11. Play a hunted species guessing game 28
Lesson 12. Why should hunting be sustainable? 29

**Chapter 5. Forests and water** 31
Lesson 13. How much freshwater is there on Earth? 33
Lesson 14. Make clouds 35
Lesson 15. How do forests fit into the water cycle? 36
Lesson 16. Create a water cycle model 38

**Chapter 6. Medicinal Plants** 41
Lesson 17. How do forest plants keep us healthy? 43
Lesson 18. Perform a medicinal plant role play 45
Lesson 19. Which modern medicines come from the forest? 46

**Chapter 7. Wood products** **50**
Lesson 20. How do we use wood products? 51
Lesson 21. Create a wood product gallery 52
Lesson 22. Play a wood product guessing game 53

**Chapter 8. Wood processing** **58**
Lesson 23. How is wood processed? 59
Lesson 24. Make a wooden picture frame 60
Lesson 25. How does a sawmill work? 61

**Chapter 9. Forests and livelihoods** **64**
Lesson 26. How do people earn a living from forests? 65
Lesson 27. What happens when a forest declines? 66
Lesson 28. Play a forest livelihood miming game 66

# Foreword

Teaching young people about protecting and sustainably managing forests is vital for our future.

Forests play important roles in our daily lives – they are a source of food, wood, medicines and energy for billions of people worldwide, and they host more than three-quarters of the world's terrestrial biodiversity. By sequestering carbon and influencing microclimates, forests help mitigate climate change; moreover, forests help communities adapt to climate change and increase their resilience to climate-related shocks.

The key to maintaining forests and their benefits over time is to manage them sustainably – this means ensuring that what is harvested in a forest is allowed to grow back and that the many values of forests are maintained over time. Today, however, people are increasingly disconnected from nature and lack awareness of forests and their benefits.

Forest education builds the knowledge, skills and shared values that underpin sustainable forestry and its contributions to sustainable development goals, such as those set out in the 2030 Agenda for Sustainable Development. In recent years, however, international forums have expressed concern that, in most countries, forest-related education is insufficient and outdated. The net result in a lack of awareness and understanding among people of all ages of the importance of forests.

Providing children with an understanding of the vital roles of forests is crucial for safeguarding natural resources for future generations. But the Global Assessment of Forest Education, published by the Food and Agriculture Organization of the United Nations (FAO) in 2022, reported that, in Africa, resources and learning materials for forest education in primary schools are absent or available to only a limited extent. The assessment also found that a lack of awareness-raising about nature in primary schools has contributed to a low level of interest in forest education.

It is essential that children in primary schools today learn about forests so they know why forests matter and how they can be used sustainably and thereby protected and maintained over time. Moreover, inspiring children from an early age about forests can help open new horizons and influence career pathways. When young people have a clear picture of forestry and the sector's role in solving sustainable development challenges, they are more likely to consider forestry as a viable career choice.

The education modules presented here are designed for children aged 9–12 in grades 3–5. They will increase the forest literacy of the children and, in the long term, enhance their capacity to make decisions in favour of sustainable forest use. The modules are inspired by the principles of the "education for sustainable development" (ESD) approach, which is based on learning methods that motivate and empower learners to make informed decisions, change their behaviour, and take responsible action for the benefit of the present and future generations. They use a more hands-on and interactive approach than standardized education methods.

The modules have been developed by the Ministry of Natural Resources and Tourism of the United Republic of Tanzania in the framework of the project, "Forests for a Sustainable Future: Educating Children", with technical contributions by FAO and the support of the German Federal Ministry for Food and Agriculture.

**Nyabenyi Tito Tipo**

FAO Representative in the
United Republic of Tanzania

November, 2023

# Acknowledgements

These education modules have been developed under the supervision of the Division of Forestry and Beekeeping in the Ministry of Natural Resources and Tourism of the United Republic of Tanzania, with contributions and technical guidance from the FAO Forestry Division, the FAO Subregional Office for Southern Africa, and the FAO Representation in the United Republic of Tanzania.

The modules are the result of an extensive revision and validation process involving the following Tanzanian organizations: Ministry of Education and Vocational Training; Sokoine University of Agriculture; Mtemi Mazengo Primary School; College of African Wildlife Management – Mweka; Tanzania Forest Industries Training Institute; Beekeeping Training Institute; Mji Mpya Secondary School; Mhonda Teachers College; Kikunyu Secondary School; University of Dodoma; Tanzania Institute of Education; Jordan University; Mazimbu A Primary School; Ministry of Higher Education, Science and Technology; Vocational Education and Training Authority; Forestry Training Institute Olmotonyi; National College of Tourism; and Tanzania Forestry Research Institute.

Sincere thanks go to all FAO staff and consultants for their valuable inputs to the development of these education modules, especially Maria De Cristofaro, Michela Conigliaro, Geofrey Bakanga, Jill Hannon, Fiona Winward, Greta Castelli, Alastair Sarre and Lucia De Canio. Special appreciation goes to Christoph Rullmann, Ulrike Schuth, Beate Kohler and Celia Schroeckh at the German Association for the Protection of Forests and Woodlands (SDW.de) for their support in the development of the activities. Thanks to Stefanie Steinebach at the University of Applied Forest Sciences, who reviewed the modules from a pedagogic and didactic perspective. Acknowledgement for their inputs also goes to education experts Christina Kifunda at the University of Dodoma and Jasson Kalugendo at the University of Dar es Salaam and to forestry experts Siima Bakengesa at the Tanzania Forestry Research Institute and John Wanjala and Emma Nzunda at the Ministry of Natural Resources and Tourism, United Republic of Tanzania.

Finally, thanks to the teachers and pupils of Gogo Primary School, Dar es Salaam, and Mazimbu A Primary School, Morogoro, for participating in the piloting of the modules.

CHAPTER 1

# THE BENEFITS OF FORESTS

© CC BY-ND 2.0 Jürgen Schmücking on Flickr

In this chapter, you will learn how to:

1. identify the products and services provided by forests;
2. explain the impacts of forest overexploitation; and
3. communicate your acquired knowledge on the benefits of forests to teachers and other pupils.

LESSON 1

# WHAT ARE THE BENEFITS OF FORESTS?

1

## 1 ACTIVITY 1: EXCHANGE FOREST EXPERIENCES

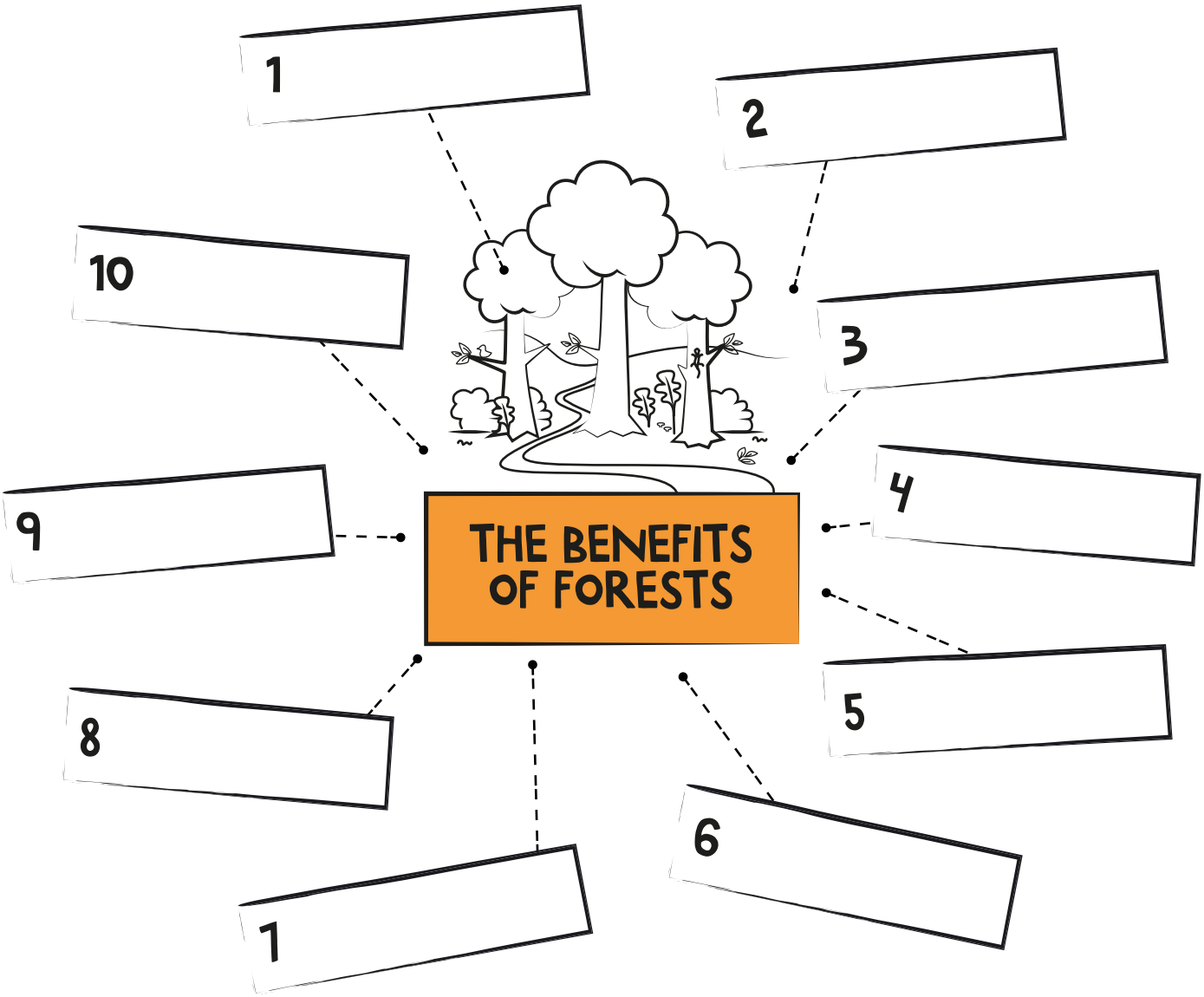
### The forest and you!

Why do you go to the forest and what do you do when you go? Write down your experiences in your exercise book. Complete your notes with experiences from others.

## 2 ACTIVITY 2: CREATE A MIND MAP OF FOREST BENEFITS

### What the forest does for us!

Copy the mind map below in your exercise book and label the different benefits of forests.



LESSON 2

# TAKE A FANTASY FOREST JOURNEY

2

## 1 ACTIVITY 1: TAKE A FANTASY JOURNEY

### Imagine you are an animal or a person in the forest!

Close your eyes and think of the different things you would do in the forest as an animal or a human.

Now listen to the text.

## 2 ACTIVITY 2: DISCUSS FOREST BENEFITS

### Is there room for humans and animals in forests?

Open your eyes and if the teacher picks you, tell the class about the journey you imagined.

Listen to the others and think how different the benefits are that humans and animals get from forests.

Listen and copy down in your exercise book what the best way is to balance the way humans and animals use forests.

LESSON 3

# PROMOTE FOREST BENEFITS

3

## 1 ACTIVITY 1: DRAW EXAMPLES OF FOREST BENEFITS

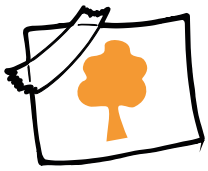
### Use your artistic skills!

Use the diagram on the blackboard to refresh your memory on what you learned in the first lesson!

Think how to draw a picture to illustrate the forest benefit your group has been assigned. If you can't think how to do that, the teacher might give you some ideas.

Draw your idea on your card and put tape on the back.

## 2 ACTIVITY 2: CREATE AN INFORMATION WALL



### Time for advertising!

Stick the drawings to a classroom wall under the correct label to create an "advertising wall". You can invite other classes, teachers and parents to learn more on the benefits of forests!

## KNOWLEDGE CHECK - CHAPTER 1

1. Can you name some services and products provided by forests?
2. Why do we need a good balance between the different uses of the forest?
3. Describe five ways we benefit from forests!

CC BY-ND 2.0 Jürgen Schmücking on Flickr

CHAPTER 2

# FOOD FROM THE FOREST

© FAO/Luis Tato

In this chapter, you will learn how to:

1. name and recognize several common foods in Tanzanian forests;
2. identify the sources of various forest foods; and
3. recognize the various parts of edible forest plants.

LESSON 4

# WHICH FOODS COME FROM THE FOREST?

4

## 1 ACTIVITY 1: BRAINSTORM ON FOREST FOODS

### A meal from the forest!

What food can you find in the forest? Make some notes. Copy the final list on the blackboard into your exercise book.

- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....

# 2 ACTIVITY 2: DESCRIBE SOME FOOD SOURCES IN FORESTS

## Be a food detective!

Where does the food come from? Describe and draw the following examples in your exercise books.

UBUYU FRUIT

YAM (MING'OKO)

MUSHROOMS

LESSON 5

# IDENTIFY FOODS FROM THE FOREST

5

## 1 ACTIVITY 1: IDENTIFY FOREST FOODS THROUGH SMELL (OPTION A) OR OBSERVATION (OPTION B)

### Guessing game!

Listen to the teacher's instructions and try to identify as many foods as possible, see how many you can guess!

LESSON 6

# WHICH PARTS OF FOREST PLANTS ARE EDIBLE?

6

## 1 ACTIVITY 1: DISCOVER FOODS THAT COME FROM THE FOREST

### Name game!

Try to guess: Which of the foods written on the blackboard come from the forest or contain ingredients that are found in the forest?

## 1 ACTIVITY 1: LIST THE EDIBLE PLANT PARTS

### Tasty plants!

Copy the diagram below in your exercise book and complete it with the correct examples as discussed in class and shown on the blackboard.

**EDIBLE PLANT PARTS FROM THE FOREST**

**LEAVES**

Examples:

**FRUIT**

Examples:

**NUTS**

Examples:

**ROOTS**

Examples:

**BARK**

Examples:

## KNOWLEDGE CHECK - CHAPTER 2

1. Can you name and describe common edible products from Tanzanian forests?
2. Where does the food in the forest come from? Do you know the different sources?
3. Can you name the edible plant parts?

© FAO/ Luis Tato

CHAPTER 3

# EDIBLE INSECTS

© FAO/Luis Tato

In this chapter, you will learn how to:

1. identify and describe features of insects;
2. explain how edible insects benefit people's health and livelihoods; and
3. understand the ways in which insects affect forest ecosystems.

LESSON 7

# WHAT IS AN INSECT?

7

## 1 ACTIVITY 1: BRAINSTORM ON INSECTS YOU KNOW

Find the correct answers to the following questions and write down both in your exercise book.

1) What kinds of insects are found in the forests and grasslands of the United Republic of Tanzania?

.....

2) Which of these insects are edible?

.....

3) What dishes do we serve containing edible insects?

.....

4) How many people do you think eat insects worldwide?

.....

5) Why might edible insects be good for your health?

.....

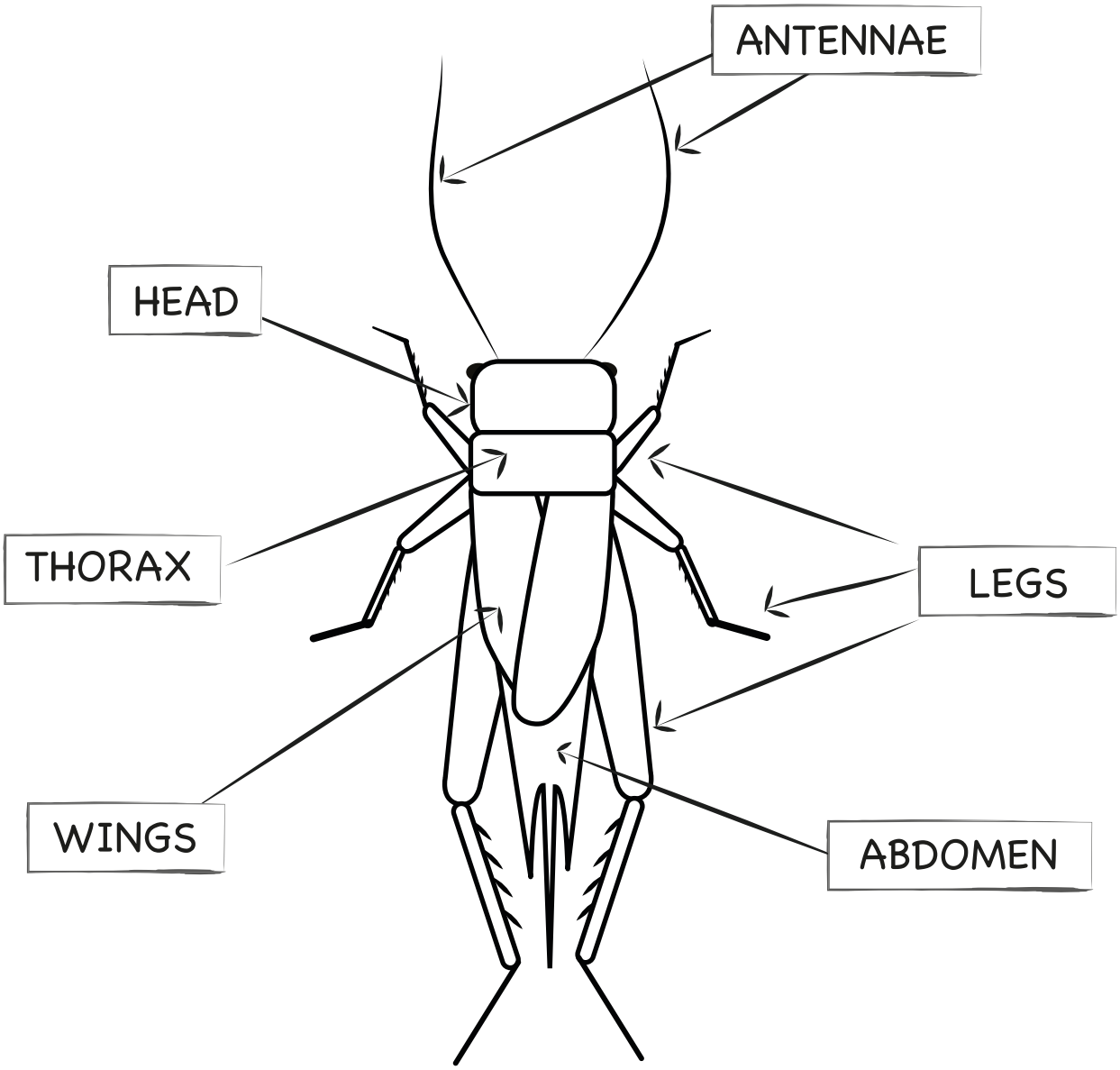
6) Why might eating insects be good for the planet?

.....

## 2 ACTIVITY 2: DRAW AN INSECT

### Are you an artist?

Draw your chosen insect on the page you've been given. Include and label the different parts of the insect's body. The illustration here will help you!



LESSON 8

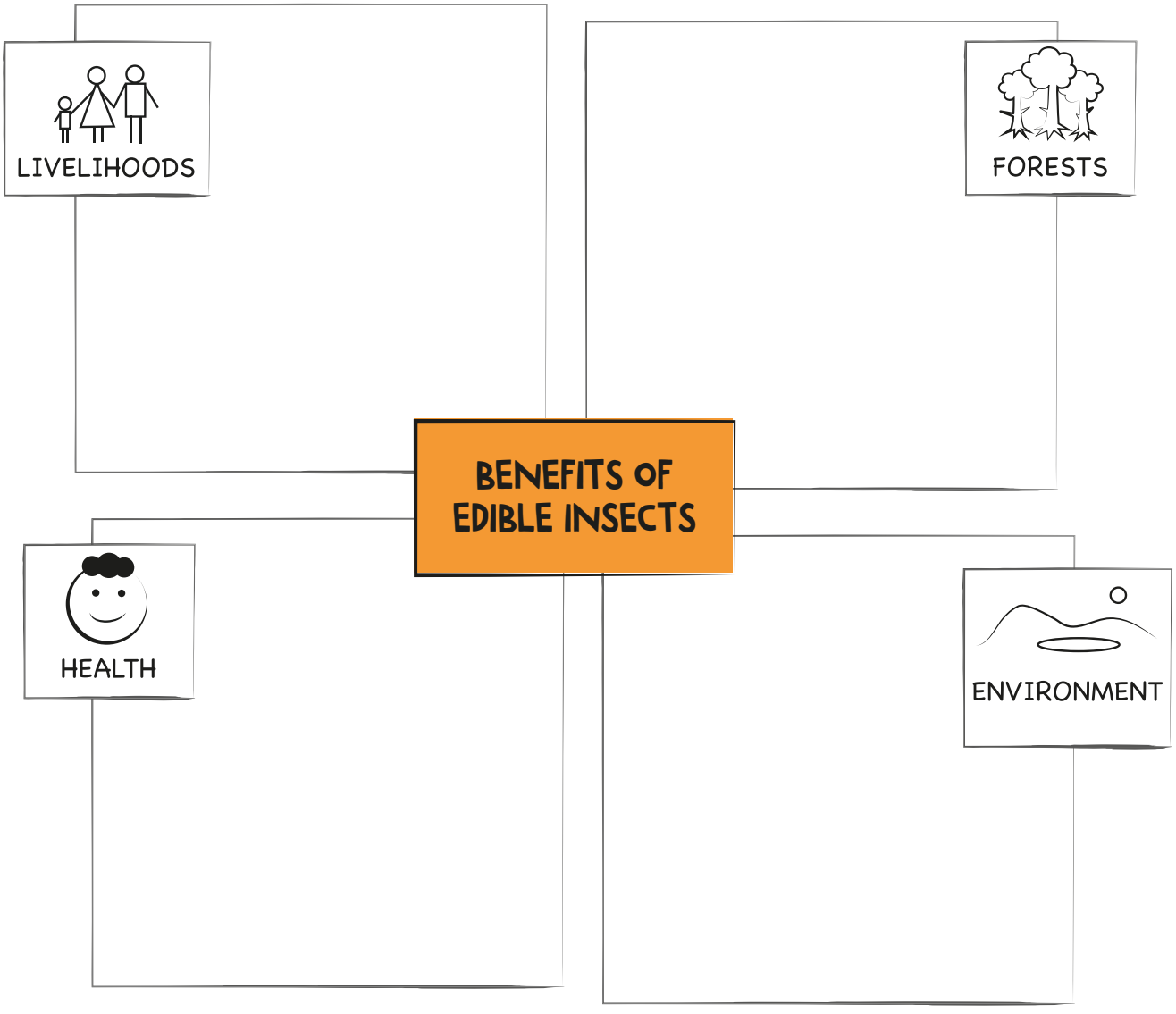
# EXPLORE THE BENEFITS OF EDIBLE INSECTS

8

## 1 ACTIVITY 1: DISCUSS THE BENEFITS OF INSECTS

Stay friendly with insects – we really need them!

Copy the boxes below in your exercise book and fill them in following the teacher's instructions and discussion in class.



LESSON 9

# DISCOVER AN EDIBLE INSECT RECIPE

9

## 1 ACTIVITY 1: TEST YOUR KNOWLEDGE OF INSECTS

### Are you an insect specialist?

Find the correct answers, then copy the question and correct answer in your exercise books. You can help each other.

1. How many legs do insects have?
   a. 4
   b. 8
   c. 6

2. How many people worldwide eat insects?
   a. 100
   b. 1 000
   c. At least 2 billion

3. What are the three main body parts of an insect?
   a. Head, thorax and abdomen
   b. Head, body and feelers
   c. Front, middle and end

4. How do insects benefit forests?
   a. Pollinate plants
   b. Compost waste
   c. All of the above

5. What are the nutritional values of insects?
   a. Protein, fats, vitamins and minerals
   b. Sugar
   c. Oil

6. Which of these edible insects are found in the United Republic of Tanzania?
   a. Kumbikumbi (flying termite)
   b. Senene (grasshopper)
   c. Both

7. What is the structure that supports the bodies of insects called?
   a. Skeleton
   b. Muscles
   c. Exoskeleton

8. Which of the two produces a larger quantity of methane when farmed?
   a. Cows
   b. Insects

9. How many species of insects are edible?
   a. More than 1 900 species
   b. 100 species
   c. 10 species

# 2 ACTIVITY 2: LEARN HOW TO COOK FLYING TERMITES

## What do we need?

Write down the ingredients in your exercise book.

- .....
- .....
- .....

## Let´s try that!

Put the recipe steps in the right order.

If you want, follow the steps of the recipe at home and enjoy your meal!

ADD SALT

TURN DARK BROWN

HEAT THE PAN

30 MINUTES

SERVE WITH UGALI

DRY ROASTING (COOKING WITHOUT OIL)

COOK THE TERMITES

## KNOWLEDGE CHECK - CHAPTER 3

1. Can you name some edible insects from the United Republic of Tanzania?
2. Which are the parts of an insect?
3. Why do we need insects? What are some of their benefits?

## PREPARATION FOR THE NEXT LESSON

Discuss the topic of hunting at home with your family.

- Have you or any family members ever participated in a hunt?
- Do you know people who have hunted? If so, what animals were hunted?
- Do you know how a hunt works? What does your family think about hunting?

CHAPTER 4

# HUNTING

© CC BY 2.0 Susan Jane Golding on Flickr

In this chapter, you will learn how to:

1. describe different types of hunting;
2. name and describe some of the wild animals commonly hunted for food in the United Republic of Tanzania; and
3. explain how responsible hunting can help conserve biodiversity while also providing livelihoods for hunters.

LESSON 10

# WHO HUNTS WHAT IN TANZANIAN FORESTS?

10

## 1 ACTIVITY 1: DISCUSS HUNTING

### What does it mean to you?

Share what you know about hunting with your teacher and classmates!

## 2 ACTIVITY 2: CATEGORIZE HUNTERS

What are the two categories of hunters? Copy the diagram on the blackboard in your exercise book.

### Hunting – good or bad?

What are the advantages and disadvantages of hunting?

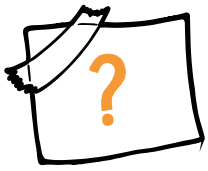
LESSON 11

# PLAY A HUNTED SPECIES GUESSING GAME 11

## 1 ACTIVITY 1: GUESS THE ANIMAL

Listen to the teacher describing an animal often hunted for meat in the United Republic of Tanzania. Try to guess what it is!

## 2 ACTIVITY 2: TEST YOUR KNOWLEDGE ABOUT HUNTED ANIMALS




Find your group and work with your teammates to create your own clues.

Then, find another group and exchange clue sheets. Can you guess their animal?

LESSON 12

# WHY SHOULD HUNTING BE SUSTAINABLE? 12

## 1 ACTIVITY 1: LEARN THE IMPORTANCE OF BALANCE

Take turns playing the game and being observers. What do you notice?

## 2 ACTIVITY 2: DISCUSS THE IMPORTANCE OF SUSTAINABLE HUNTING

### Why is it important?

Listen carefully to your teacher's recap and write down the key sentences in your exercise book.

# KNOWLEDGE CHECK - CHAPTER 4

1. Do you know different types of hunting?
2. Name and describe three wild animals that are most hunted for food in the United Republic of Tanzania!
3. Why do we need sustainable hunting?

CHAPTER 5

# FORESTS AND WATER

© Shutterstock.com/Curioso Photography

In this chapter, you will learn how to:

1. explain the two main types of water (freshwater and saltwater) and their distribution on Earth;
2. develop an awareness of the importance of water;
3. explain the five steps of the water cycle and the roles played by forests in regulating this; and
4. understand the importance of forests in water management.

LESSON 13

# HOW MUCH FRESHWATER IS THERE ON EARTH?

13

## 1 ACTIVITY 1: LEARN ABOUT FRESHWATER

### You are the water now!

Follow the instructions and listen to the teacher's explanation to find out how much freshwater there is on Earth.

## 2 ACTIVITY 2: DISCOVER HOW WATER IS DISTRIBUTED ON EARTH

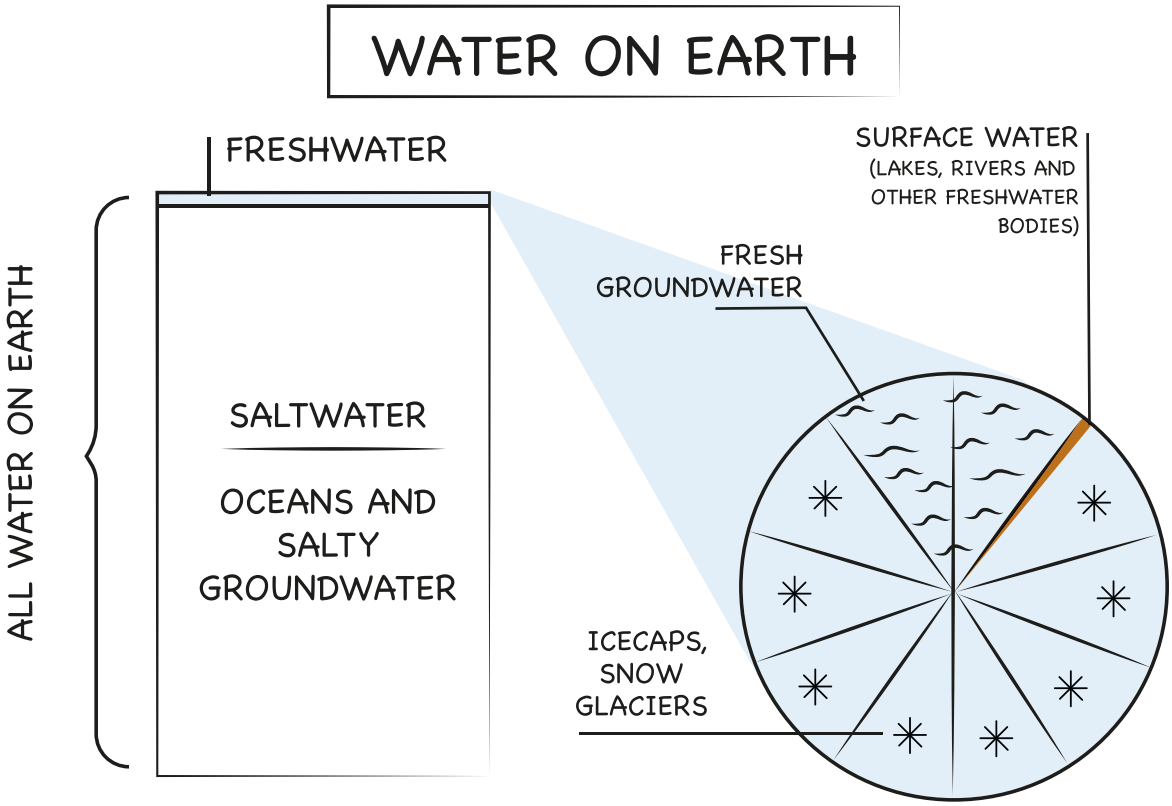
### Spot the difference

Look at the map and listen to the teacher. Can you spot the different sources of fresh and salty water?

## 3 ACTIVITY 3: COMPARE FRESH AND SALTY WATER VOLUMES

### Have a closer look!

Listen to your teacher. Follow the instructions step-by-step and copy the image on your exercise book.



LESSON 14

# MAKE CLOUDS

14

## 1 ACTIVITY 1: MAKE CLOUDS

### How clouds are formed!

Pay attention to the experiment being demonstrated by your teacher. Then, write the key sentences in your exercise book.

Key sentences:

- .....
- .....
- .....
- .....

LESSON 15

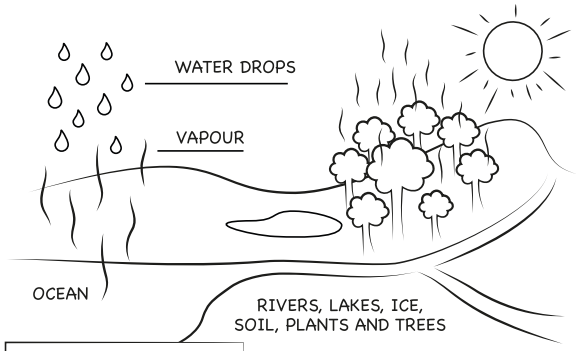
# HOW DO FORESTS FIT INTO THE WATER CYCLE?

15

## 1 ACTIVITY 1: DISCUSS THE ROLE OF FORESTS IN THE FIVE STAGES OF THE WATER CYCLE

### Water everywhere!

Pay attention to your teacher to discover all the stages of the journey of water on Earth. Copy the drawings and explanations in your exercise book.




1. EVAPORATION

.....

.....

.....

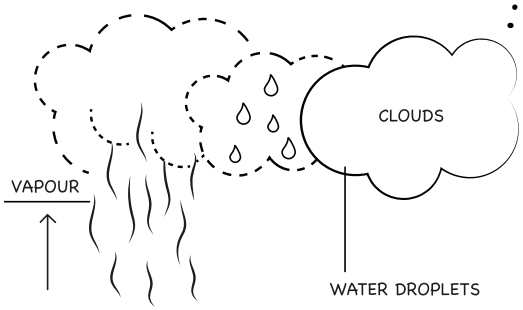
.....

.....

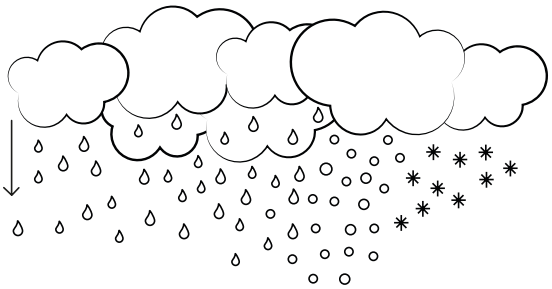
.....

.....

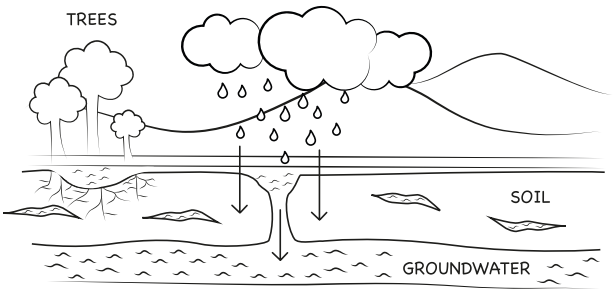
.....



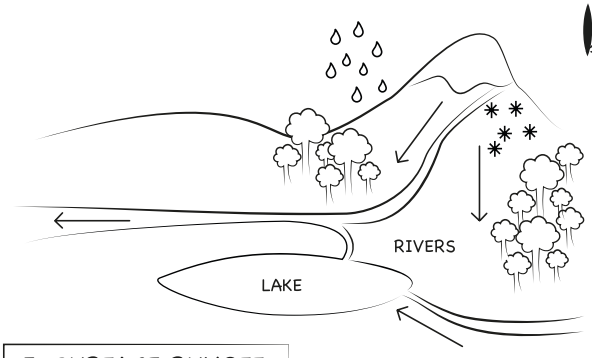

2. CONDENSATION



3. PRECIPITATION




4. INFILTRATION




5. SURFACE RUNOFF

LESSON 16

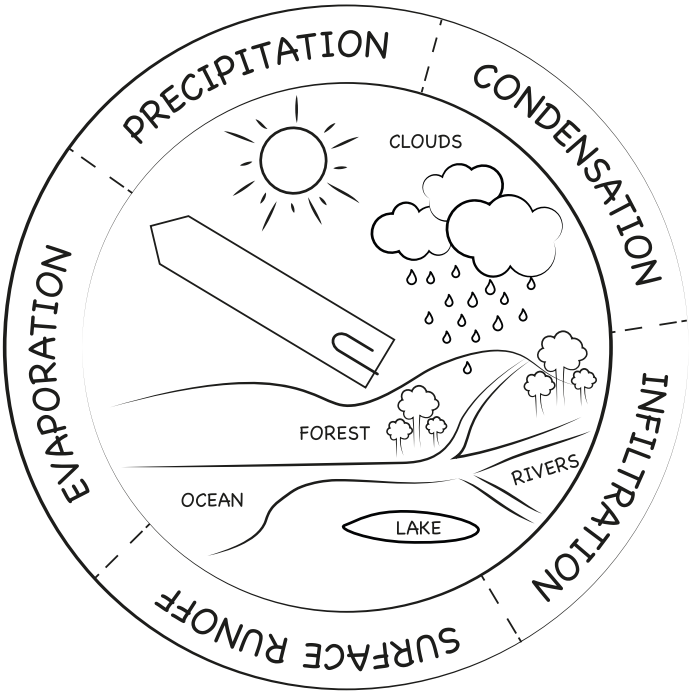
# CREATE A WATER CYCLE MODEL

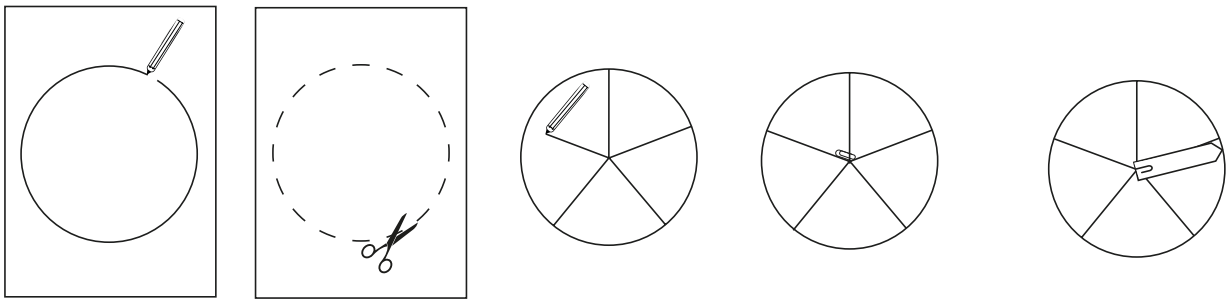
16

## 1 ACTIVITY 1: CREATE A WATER-CYCLE MODEL

### My own portable water cycle!

Have a look at the five steps of the water cycle from the previous lesson. In your group, follow your teacher's instructions to create a water-cycle model.



1. 2. 3. 4. 5.

## 2 ACTIVITY 2: REFLECT ON THE ROLE OF FORESTS IN THE WATER CYCLE

### Why are trees and forests important in the water cycle?

Write down the question above and the correct answers in your exercise book.

A .....

.....

B .....

.....

C .....

.....

## KNOWLEDGE CHECK - CHAPTER 5

1. What types of water are there on Earth?
2. How are the different types of water distributed on Earth?
3. Can you explain the five steps of the water cycle?
4. Why are forests very important for water management?

## PREPARATION FOR THE NEXT LESSON

If asked by the teacher, bring to class different medicinal plants or parts of medicinal plants that are commonly used in the United Republic of Tanzania. If you need help, ask somebody at home.

CHAPTER 6

# MEDICINAL PLANTS

© Shutterstock.com/ marilyn barbone

In this chapter, you will learn how to:

1. identify examples of medicinal plants found in forests in the United Republic of Tanzania and the plant parts typically used as traditional remedies;
2. describe the common uses of these medicinal plants and the ailments they can treat; and
3. describe forest plants whose active ingredients have been synthetized and are used in modern medicines.

LESSON 17

# HOW DO FOREST PLANTS KEEP US HEALTHY? 17

## 1 ACTIVITY 1: DISCUSS THE ROLE OF FOREST MEDICINAL PLANTS

### How plants can help us when we are sick!

Listen to your teacher.

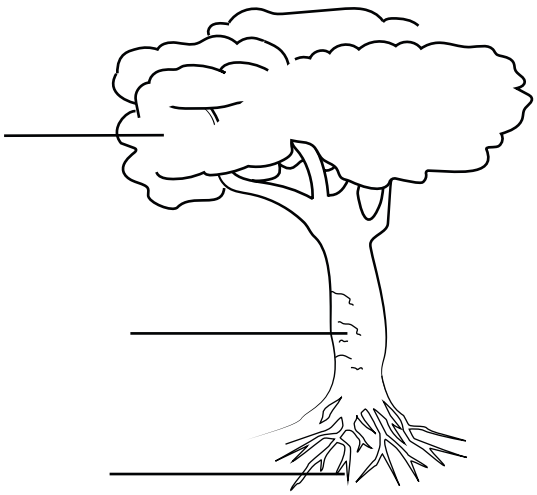
Write down in your exercise book the name of the plant or of the tree, and which illnesses it can help treat.

| PICTURE | PLANT NAME | MEDICAL USE |
|---|---|---|
| | | |
| | | |
| | | |

| | | |
|---|---|---|
| | | |
| | | |
| | | |

## 2 ACTIVITY 2: LEARN WHICH PARTS OF MORINGA ARE USED IN TRADITIONAL REMEDIES

Can you help the teacher to label the diagram?



LESSON 18

# PERFORM A MEDICINAL PLANT ROLE PLAY 18

## 1 ACTIVITY 1: LEARN WHICH MEDICINAL PLANTS ARE USED FOR DIFFERENT DISEASES

Listen to the teacher's instructions and have fun in your role!

## PREPARATION FOR THE NEXT LESSON

Find out which medicinal plants your family uses when someone is ill.

- How are the medicines prepared?
- Does your family also use medicines from a pharmacy?

Write your answers in your exercise book and bring them to the next lesson.

LESSON 19

# WHICH MODERN MEDICINES COME FROM THE FOREST?

19

## 1 ACTIVITY 1: LEARN ABOUT MODERN MEDICINES THAT COME FROM MEDICINAL PLANTS

### Pharmacy versus nature? Nature = pharmacy?

Tell the class about the different types of treatment your family use when someone is ill.

The teacher will make a list of medicinal plants and modern medicines used by everyone's families.

Now copy the table showing which modern medicines are made from plants into your exercise book.

| MODERN MEDICINES | PURPOSE | PLANT FROM WHICH THE MEDICINE IS DERIVED |
|---|---|---|
| | | |

# 2 ACTIVITY 2: TEST YOUR KNOWLEDGE ABOUT MEDICINAL PLANTS

## Medicine and plants – why biodiversity is important for our health!

Answer the following questions, then copy them together with the correct answers into your exercise book.

How many plants are estimated to be used in the United Republic of Tanzania as medicinal plants?

a. 10

b. 100

c. 1 200

How many people are estimated to use indigenous traditional medicine, including medicinal plants, in the United Republic of Tanzania?

a. Less than 2 people in 10

b. 4 people in 10

c. Almost 8 people in 10

How many plants are recorded as being used as medicine, worldwide?

a. About 200

b. About 1 000

c. More than 28 000

## Can you buy medicinal plants from a pharmacy?

Copy the answer provided by your teacher into your exercise book.

.....

.....

.....

.....

.....

.....

# KNOWLEDGE CHECK - CHAPTER 6

1. Which plants found in the United Republic of Tanzania can help us when we are sick?
2. What are the ailments that medicinal plants can help to treat?
3. Which plants are used to make some modern medicines?

CHAPTER 7

# WOOD PRODUCTS

© CC BY-SA 4.0, NinaRundsveen via Wikimedia Commons

In this chapter, you will learn how to:

1. understand various uses of wood products in everyday life;
2. recognize which products used in schools, homes and communities are made of wood; and
3. identify some of the trees from which wood products are made.

LESSON 20

# HOW DO WE USE WOOD PRODUCTS?

20

## 1 ACTIVITY 1: BRAINSTORM ON WOOD PRODUCTS

What wood products have you seen at home or on your way to school? Brainstorm with your classmates.

## 2 ACTIVITY 2: DRAW SOME WOOD PRODUCTS YOU KNOW

### What is made from wood?

Draw in your exercise book the wood products that you use or see in school, at home or in your community. The questions below can help you. Do not show your drawings to anyone – you will share them in groups during the next lesson.

What wood products did you see on the way to school?

What wood products do you see in the classroom?

What wood products did you see at home?

LESSON 21

# CREATE A WOOD PRODUCT GALLERY

21

## 1 ACTIVITY 1: DISCUSS THE IMPORTANCE OF WOOD PRODUCTS

Share your drawings from the previous lesson with your classmates, then pick the one that your group thinks is the most important and draw it on a manila card.

## 2 ACTIVITY 2: SHOW YOUR GROUP'S DRAWING

Take a walk around your private art gallery and observe the drawings from the other groups.

## 3 ACTIVITY 3: DISCUSS THE DRAWINGS

### What did you notice?

Answer the following questions, then copy the summary from the blackboard into your exercise book.

1. Which items were drawn most?
2. Which items were missing?
3. Which items did you find surprising, and why?

LESSON 22

# PLAY A WOOD PRODUCT GUESSING GAME 22

## 1 ACTIVITY 1: IDENTIFY WOOD PRODUCTS FROM DIFFERENT TYPES OF TREES

### What´s their name?

Look at the pictures of different trees on the board and in your group decide which tree the wood comes from that was used to make your products.

When all the groups have placed their products card under a tree, copy the names of the trees and the examples of the products made from them into your exercise books.

Ebony tree (msindi) - hardwood

East African mahogany - hardwood

Acacia tree - hardwood

Pine tree - softwood

East African blackwood (mpingo) - hardwood

## What is made from what?

Write down some examples of wood products in your exercise book.

Wood products made from hardwood:

.....

.....

.....

Wood products made from softwood:

.....

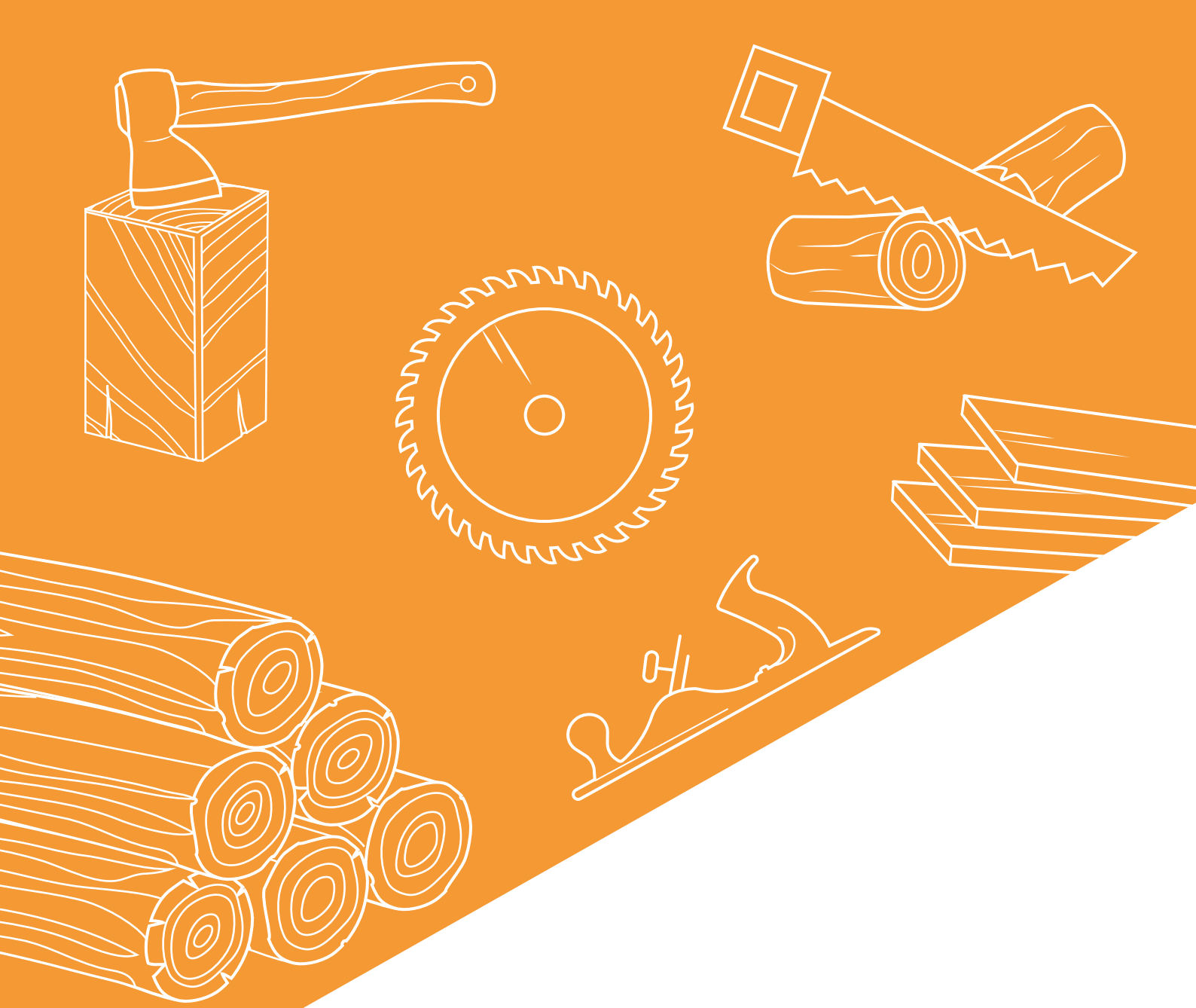
.....

.....

## KNOWLEDGE CHECK - CHAPTER 7

1. What are different uses of wood products in everyday life?
2. Which products in your surroundings are made of wood?
3. Can you name six types of trees that can be used to make wood products?

© CC BY-SA 4.0 NinaRundsveen via Wikimedia Commons



CHAPTER 8

# WOOD PROCESSING

In this chapter, you will learn how to:

1. identify products made from sawnwood and from woodpulp;
2. explain various ways in which wood is processed; and
3. describe how sawmills work.

LESSON 23

# HOW IS WOOD PROCESSED?

23

## 1 ACTIVITY 1: REVIEW SOME TYPES OF WOOD PRODUCTS

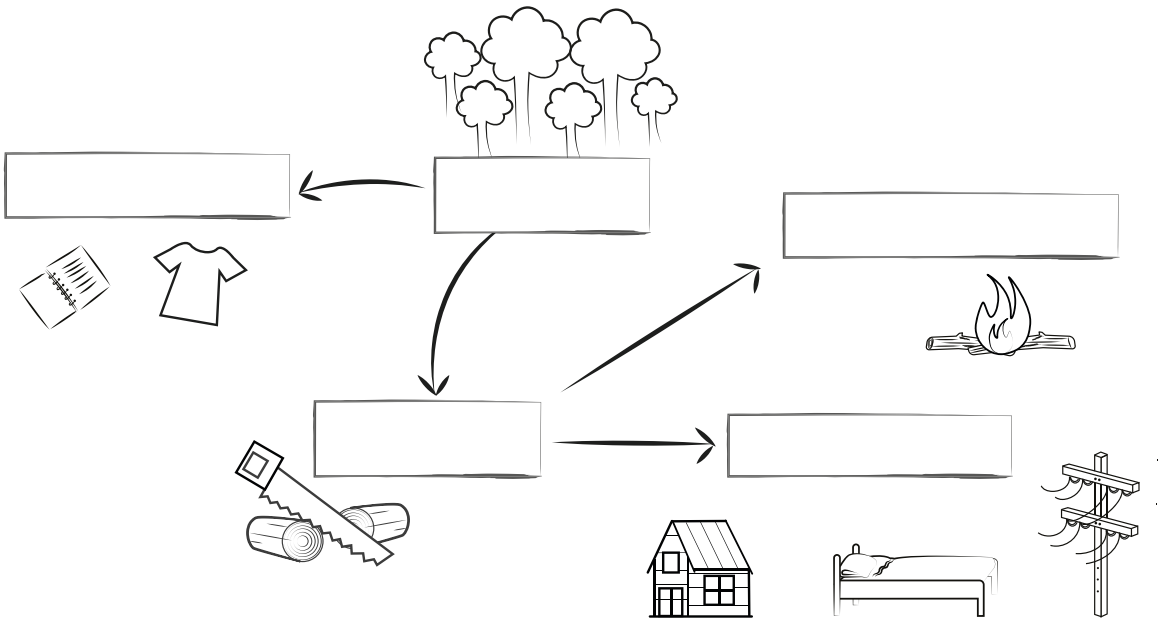
### Bounce ideas around!

Take some time to review what you learned in the previous lesson. When the ball comes to you be ready to name a wood product.

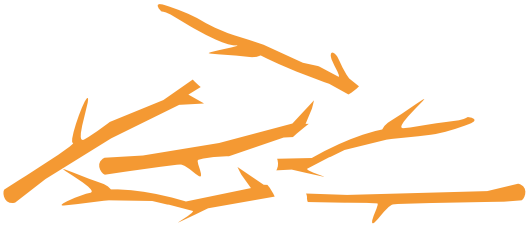
## 2 ACTIVITY 2: DISCOVER TWO WAYS IN WHICH WOOD IS PROCESSED

### Check out the types of wood processing!

Listen to your teacher's explanation and think which products are made from sawnwood and which from woodpulp, then copy the sketch into your exercise book and fill in the missing words. Add some more examples.



## PREPARATION FOR THE NEXT LESSON



If asked by the teacher, bring a stick, like the one your teacher shows you, to the next lesson. It should be at least 1 cm (centimetre) (maximum 3 cm) in diametre and 30–40 cm long.

LESSON 24

# MAKE A WOODEN PICTURE FRAME

24

## 1 ACTIVITY 1: DO YOUR WOODWORK

Go outside and, in your group, try your hand at woodworking! Don't forget to keep your picture frames safe for your next lesson.

LESSON 25

# HOW DOES A SAWMILL WORK?

25

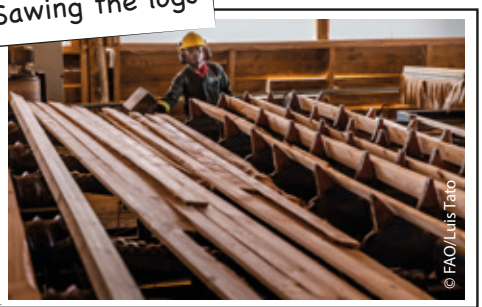
## 1 ACTIVITY 1: DISCUSS HOW A SAWMILL WORKS

### Are you a good sawmill worker?

Have a look at the following pictures and listen to your teacher describe the different steps in a sawmill.

1. Log delivery and pre-sorting

2. Sawing the logs




3. Sorting

4. Drying

5. Inspection and storage

6. End product

## 2 ACTIVITY 2: REFLECT ON WHAT HAPPENS IN A SAWMILL

In the same group as before, discuss how to draw the step you have been assigned, and then draw your own picture. When everyone has finished, put the pictures into the frames you made.

## KNOWLEDGE CHECK - CHAPTER 8

1. What is the difference between products that are made from sawnwood and those that are made from woodpulp? Give some examples.
2. What are the different ways that wood is processed?
3. Can you explain what happens in a sawmill?

CHAPTER 9

# FORESTS AND LIVELIHOODS

© FAO/Luis Tato

1. In this chapter, you will learn how to:
2. describe how local communities benefit from forests;
3. identify possible sources of income from forests; and
4. understand the importance of managing forests sustainably for maintaining livelihoods over time.

LESSON 26

# HOW DO PEOPLE EARN A LIVING FROM FORESTS?

26

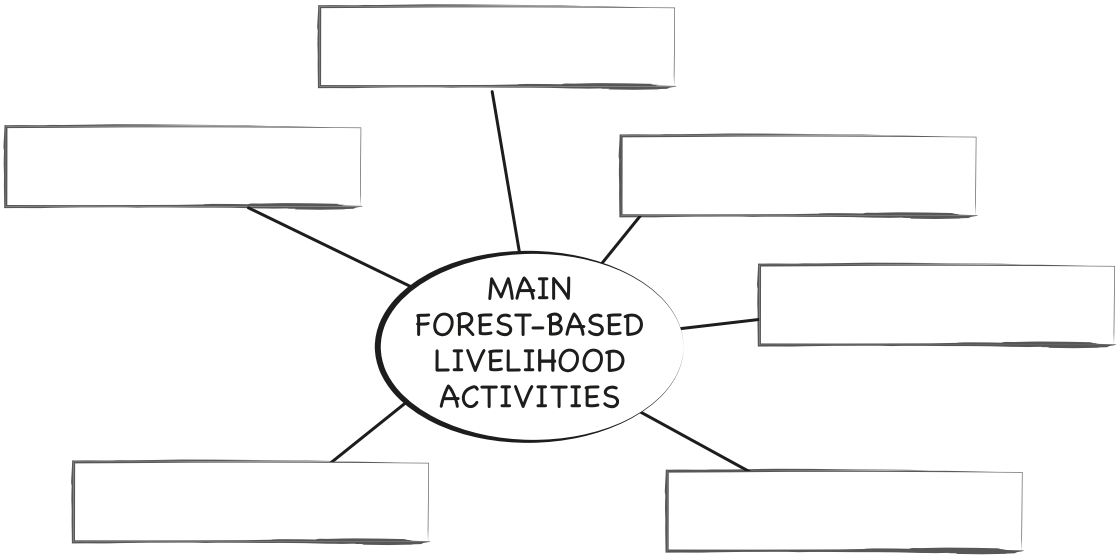
## 1 ACTIVITY 1: COLLECT IDEAS ON FORESTS AND LIVELIHOODS

There are many ways to earn money from the forest, can you name a few? Give your ideas when the talking-stick comes to you.

## 2 ACTIVITY 2: LEARN ABOUT THE MAIN FOREST-BASED LIVELIHOOD ACTIVITIES

Listen to your teacher's explanations, then copy the mind map into your exercise book and fill in the gaps.

Did you find more examples? Copy them from the blackboard, too.



LESSON 27

# WHAT HAPPENS WHEN A FOREST DECLINES?

27

## 1 ACTIVITY 1: LEARN THE IMPORTANCE OF BALANCE

Go outside and listen carefully to the rules of the game explained by your teacher. As you act out your role, pay attention to what is happening. What do you think the game represents?

LESSON 28

# PLAY A FOREST LIVELIHOOD MIMING GAME

28

## 1 ACTIVITY 1: RECAP FROM THE PREVIOUS LESSON

Take a couple of minutes to reflect on what you learned in the last two lessons and share your thoughts with the class.

## 2 ACTIVITY 2: MIME WHY FORESTS ARE IMPORTANT FOR LIVELIHOODS

Plan in your group how to mime the reason you have been given why forests are important for livelihoods.

Perform your mime and guess what the other groups are acting out.

### Why we must protect our forests!

Listen to the teacher and copy what she explains into your exercise book.

## KNOWLEDGE CHECK - CHAPTER 9

1. How do local communities benefit from the forest?
2. What are possible sources of income that the forest can provide?
3. Why is it important to use forest resources in a sustainable way?

ISBN 978-92-5-137692-8

9 789251 376928

CC4631EN/1/02.24